

IDEM **Clean Air Bulletin**

August 2000

Volume 3, Issue 1



IDEM presented emissions data for the Northwest Indiana diesel forum.

Diesel Emissions Initiative Underway in Northwest Indiana

■ OAM coordinates community program

The effects of diesel emissions on Northwest Indiana air quality and human health have long been a concern to citizens in the region. The Office of Air Management's Northwest Indiana Diesel Emissions Initiative is in direct response to the community's concern.

Indiana has achieved vast improvements in air quality throughout the state, including in Northwest Indiana. Measures are already in place to enhance and preserve air quality. However, particulate matter (soot) and regional haze are becoming more of a concern nationwide, and there has been a recent growth in research linking diesel emissions and fine particulate exposure to health concerns.



The Indiana State Police Motor Carrier Enforcement Division and IDEM teamed up to conduct voluntary diesel emission testing.

Diesel continued on page 4

Ozone Reduction Efforts Continue

Indiana has made great progress toward meeting federal health standards for most of the criteria pollutants listed in the Clean Air Act. However, more work needs to be done in several Indiana counties so they can meet the health standard for ozone. These include Clark and Floyd counties in the greater Louisville metropolitan area and Lake and Porter counties in the greater Chicago metropolitan area. Control measures required by the Clean Air Act Amendments of 1990, as well as other state clean

air programs, have improved air quality in these metropolitan areas significantly, but in recent years they have experienced too many days of excessive ozone.

Although industries and vehicle traffic contribute to the ozone problem, ozone is also transported regionally from industrial and power plant emissions outside these areas and outside of Indiana. Due to a federal study of transported ozone, the U.S. Environmental Protection Agency (EPA) issued

a mandate in 1998 for states to require nitrogen oxides (NO_x) reductions (NO_x SIP Call) from power plants and industrial boilers in 22 states, including Indiana. NO_x, like volatile organic compounds (VOCs), is a precursor of ozone, that is, it reacts in the presence of sunlight and heat to create ozone.

Many states, including Indiana, disagreed with the federal approach in the NO_x SIP Call, which set a single standard without allowing states to tailor a regulation to their

NO_x continued on page 4

From The Assistant Commissioner ...

The Office of Air Management is pleased to bring back the *Clean Air Bulletin*, a periodic publication intended to provide information to the public on important activities relating to air quality and clean air programs in Indiana.

Since the first issues of the *Bulletin* in 1995, there have been significant improvements in the amount of information available from the Department of Environmental Management on all its programs. Through the Department's worldwide web page at www.state.in.us/idem/, information is available on upcoming meetings, ongoing rulemaking

activities, compliance activities, air quality monitoring, and permitting issues. The bimonthly *Indiana Environment* provides information on a variety of programs across the agency. A link to the *Clean Air Bulletin* will also be available via the department's web page. The *Bulletin* will not compete with either of these sources of information, but will provide more in-depth information about specific initiatives, challenges and accomplishments that affect the air we breathe in Indiana. For example, in this issue, we highlight the Department's efforts to develop clean air plans for Clark, Floyd, Lake and Porter Counties to meet

the federal health standard for ozone and the critical role that reductions in nitrogen oxide emissions will have in meeting that goal.

We welcome your feedback on this publication, and seek your suggestions for topics to cover in future issues.

--Janet McCabe, OAM
Assistant Commissioner



Project LEAP Develops Environmental Curriculum

■ New learning tool focuses on Indiana air issues

IDEM has recently completed the air quality module of its environmental curriculum, known as Project LEAP (Learning and Environmental Awareness Partnership). Project LEAP has provided curriculum to over 700 Indiana educators teaching more than 30,000 students in grades 3-8.

Project LEAP introduces students to environmental science through a review of basic scientific elements, formation and sources of pollution and the effects of pollut-

ants on the ecosystem. The classroom study is structured to provide students with the opportunity to gain hands-on experience using four indicator projects (acid precipitation, butterfly tracking, and two ozone/plant studies). These projects get students into the environment and help them identify, observe, take samples and record data. Classroom activities for more advanced students allow them to develop and integrate new skills

such as environmental chemistry and field sample collection. The materials incorporate information to reflect environmental issues facing Indiana citizens.

To learn more about Project LEAP, visit our Web site at: www.state.in.us/idem/leap or call (317) 233-8180.



Smog Season 2000

■ IDEM prepared for summer ozone levels

IDEM's Office of Air Management is managing the 2000 ozone season. Ozone season starts in May and runs through September. The Office of Air Management is working with a variety of groups throughout the state who operate summer programs to educate Indiana residents about the causes and effects of ground-level ozone and ways they can participate in reducing ozone. As in prior years, IDEM's meteorologists forecast days when ozone levels are expected to be high and provide that information to the public through a variety of mechanisms.

What Is Ground-Level Ozone?

It's that brown-yellow haze commonly referred to as smog and it can take your breath away! Ground-level ozone is formed when nitrogen oxides (NOx) and

volatile organic compounds (VOCs) are "cooked" in the hot summer sun. NOx and VOCs are emitted from automobiles, lawn mowers, water recreation vehicles, gasoline fumes, industry operations, and many other activities. Most people think of industry as the main source of air pollution. The fact is that nearly *half* of the VOCs emitted come from actions of ordinary citizens as we drive our cars, maintain our homes and use a variety of common products that contain volatile chemicals.

What Can You Do To Reduce Ground-Level Ozone?

A list of voluntary actions, such as reducing the amount you drive and not mowing on Ozone Action Days, is shown on page 3. Exhaust from automobiles contains

What Are Ozone Reducing Activities?

Ozone Reducing Activities are easy and can help reduce ground level ozone formation. The top ten tips listed below are examples of ozone reducing activities that can be practiced all the time with a special emphasis on Ozone Action Days.

Top Ten Ozone Reducing Tips:

- 1. Limit Driving:** carpool and group your errands into one trip.
- 2. Take public transit:** ride the bus or take the train.
- 3. Avoid idling** and jack rabbit starts. Park and go inside instead of using the drive-through.
- 4. Avoid refueling** on Ozone Action Days: if you must refuel, wait until after sundown.
- 5. Drive the speed limit:** driving 10 mph over the speed limit reduces gas mileage by 15% and produces more harmful emissions.
- 6. Mow your grass less:** avoid mowing on hot sunny days.
- 7. Avoid using small gas-powered engines,** such as weed eaters, and water recreation vehicles on Ozone Action Days.
- 8. Choose water-based** paints, stains, and sealers instead of oil-based products.
- 9. Conserve energy** in your home and workplace to reduce energy needs from power plants.
- 10. Use an electric starter** instead of charcoal lighter fluid to start your grill.

Ozone cont'd page 7



NOx continued from page 1

needs. A lawsuit filed May 1999 put the NOx SIP Call on hold pending a decision by the court. On March 3, 2000, the federal court upheld the NOx SIP Call.

In the meantime, IDEM has been working to prepare clean air plans, called "attainment demonstrations," for Clark and Floyd counties and Northwest Indiana. Attainment demonstrations are plans that include clean air measures and air quality modeling that shows the measures will allow the area to meet the health standard for a pollutant by the required date. The Louisville area must meet the ozone standard by 2003 and the Chicago area by 2007. IDEM submitted the Louisville attainment demonstration to EPA on November 15, 1999, and the Chicago attainment demonstration is due on December 31, 2000.

IDEM has been doing air quality modeling for both the Louisville area and the Chicago area for a number of years to prepare its attainment demonstrations. The modeling shows that regional NOx reductions are necessary, along with current VOC control measures, for the two areas to meet the ozone standard. IDEM has been developing a rule to reduce NOx state-wide that is different from the NOx SIP Call. However, the lawsuit has created uncertainty about the final form of Indiana's rule. Indiana intends to move forward with rules to reduce NOx emissions and will continue to work with citizens and affected companies at each step and as the court decisions are made.

Waiting in the wings is EPA's new, tighter ozone standard, adopted in 1997. This standard is

measured over eight hours, as opposed to the current one-hour standard, and is meant to address the more typical exposure of citizens working or playing outside on a summer day. At least six metropolitan areas are at risk for not meeting the new ozone standard, including Northwest Indiana, the South Bend/Elkhart area, Ft. Wayne, Indianapolis, Evansville, and Clark/Floyd counties. In June 1999, a lawsuit challenging the new ozone standard halted its enforcement, and the case has been appealed to the U.S. Supreme Court. The Clean Air Act still requires EPA to make decisions on what areas are considered "nonattainment" of the new standard this year. EPA will seek the recommendation from the states on the new nonattainment areas. However, it has not yet provided guidance on what

these decisions will mean. IDEM intends to keep each region informed as this process unfolds, and will seek the public's input.

While many aspects of ozone regulation are up in the air right now, so to speak, several things are clear. One, air quality with respect to ozone has been improving across Indiana for many years now. Two, Indiana will move forward with a NOx rule to bring additional, substantial and tangible benefits to air quality state-wide and help Indiana meet both the existing ozone standard and the new ozone standard. Three, IDEM will keep working to reduce ozone, as well as other air pollutants, to ensure that Hoosiers have healthy air to breathe.

Diesel continued from page 1

Diesel emissions are the final frontier of vehicle-produced air pollution issues in Northwest Indiana to be explored. The region has a number of measures in place that target gasoline powered vehicles, including reformulated gasoline and a vehicle inspection/maintenance program.

The Northwest Indiana Diesel Emissions Initiative will be community-based and inclusive. IDEM is looking to the community of Northwest Indiana to help identify the problems associated with diesel emissions, devise solutions, draft a plan geared to address the problems, and implement the plan. IDEM and other agencies intend to provide technical support for these discussions and help coordinate this community-based effort.

This initiative is being carried out through a community-based workgroup consisting of interested parties from local, state, and federal governments, transportation planning agencies, industry, and environmental interests. The Office of Air Management kicked-off this initiative with a public forum in January at the Hammond Marina. The workgroup's first meeting took place in April and will be meeting regularly throughout the rest of the year. The initiative is targeted for completion in December 2000.

If anyone is interested in learning more about this initiative, or if you would like to participate in the workgroup, please contact Scott Deloney at (317) 233-5684, or e-mail Scott at the following address: Sdeloney@dem.state.in.us

Rules Highlights

Developments in the Indiana Styrene Rule

Background: Styrene is classified by U.S. EPA as a hazardous air pollutant and a highly reactive volatile organic compound contributing to ozone formation. Breathing styrene can affect the nervous system and cause depression, concentration problems, muscle weakness, tiredness, nausea, and possible eye, nose, and throat irritation. Exposure to styrene is most likely to occur from breathing air that is contaminated with styrene vapors from building materials, tobacco smoke and consumer products.

The largest emitters of styrene in Indiana are manufacturers who use resins and gel coats containing styrene to produce reinforced plastic products, such as boats, recreational vehicles, bathtubs and shower stalls. According to the Toxic Release Inventory Data for 1997 over 2000 tons of styrene were emitted by Indiana companies that are required to report emissions, with 75 percent of those emissions occurring in the northern part of Indiana. House Enrolled Act 1919 from the 1999 legislative session requires Indiana's air pollution control board to adopt rules to control styrene emissions from new and existing sources in the reinforced plastics composites fabricating industry by the end of 2000.

Status: Scheduled for final adoption by the Air Pollution Control Board on October 4, 2000.

Citation: LSA Notice # 99-125

New National Emission Standards for Hazardous Air Pollutants (NESHAPs)

Background: The 1990 Clean Air Act Amendments required U.S. EPA to establish technology-based control strategies for numerous categories of sources that emit toxic air pollutants. U.S. EPA has established standards applicable to a wide variety of sources nationwide that are either large or small sources of emissions of hazardous air pollutants. These rules are known as NESHAPs (National Emission Standards for Hazardous Air Pollutants).

The Office of Air Management plans to initiate a series of six rulemakings to incorporate by reference fourteen NESHAPs into Indiana's air pollution control rules. The rulemaking process is already underway for four categories of sources--shipbuilding and ship repair facilities, portland cement manufacturing operations, hazardous waste combustion, and steel pickling.

The remaining ten NESHAPs will be incorporated into state rules through two rulemakings. NESHAPs for pulp and paper, non-combustion, pesticide active ingredient, phosphoric acid manufacturing, generic maximum achievable control technology, off-site waste recovery operations, mineral wool production, and wool fiberglass manufacturing will be addressed in a single Section 7 Notice that is scheduled for publication in the Indiana Register on September 1. The NESHAPs for natural gas transmission and storage facilities, oil and natural gas production facilities, and publicly owned treatment works will be initiated with a single Section 8 Notice that should appear in the Indiana Register on September 1.

The **shipbuilding and ship repair NESHAP** applies to 35 shipyards nationwide. Indiana has one source located on the Ohio River in Clark County subject to this rule. The standards address toxic volatile organic compounds (VOC). The source is currently subject to a state VOC rule that limits the VOC content of various marine coatings such as primers, general coatings, and specialty coating. Because the existing VOC rule achieves the emission limits specified in the ship building and ship repair facilities NESHAP, the source will not be required to make additional reductions in emissions as a result of the NESHAP. Instead the NESHAP rulemaking will be used to address overlapping and conflicting record keeping and reporting requirements.

Status: First Notice of Comment Period ended May 1, 2000

Citation: LSA Notice # 00-69 (APCB)

The **portland cement NESHAP** applies to plants that manufacture portland cement. The standards address particulate matter hazardous air pollutants and total hydrocarbons and cover emissions from kilns, mills, clinker cooler and material handling. There are four sources in Indiana that are subject to this rule; two of the sources are also subject to the hazardous waste combustion NESHAP since they burn hazardous waste in their kilns. U.S. EPA estimates that for existing portland cement plants, the portland cement NESHAP will reduce nationwide emissions of particulate matter by

Rules cont'd on page 6

The Great Outdoors 2000

■ Project LEAP building for the future

This summer and fall, IDEM is offering Indiana schools and non-profit groups assistance with their outdoor labs and classrooms



Projects for the Outdoors '99 team included building a dock.

through the Outdoors 2000 program. Outdoors 2000 is an assistance program developed through Project LEAP (Learning and Environmental Awareness Partnership), the Indiana Department of Environmental Management and AmeriCorps. The program provides public and private schools and non-profit organizations with the physical assistance to make improvements in outdoor laboratories and classrooms.

The key to this program is IDEM's AmeriCorps members. AmeriCorps is a national service

program that provides Americans of all ages and backgrounds the opportunity to provide public service in exchange for educational financial awards. AmeriCorps programs across America work to help communities meet special needs. IDEM has one of more than twenty AmeriCorps programs in Indiana.

In 1999, the six members of the Outdoors team helped schools and non-profits across Indiana. They provided physical assistance to help create butterfly gardens, build docks, repair ponds, mulch trails, and improve pond access. The program helped more than 30 schools improve their outdoor labs.

Participating schools are

Outdoors cont'd on page 8

Rules cont'd from page 5

5,200 tons annually, hazardous air pollutant metals by 38 tons annually, and dioxin and furans by 0.033 pounds annually.

Status: Second Notice of Comment Period deadline ended July 31, 2000

Citation: LSA Notice # 00-71 (APCB)

The **hazardous waste combustor NESHAP** was adopted under the joint authority of the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA). It applies to hazardous waste incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns. Statewide, there are five sources affected by this NESHAP. Two of the sources are hazardous waste burning cement kilns. The other three sources are hazardous waste burning incinerators. The NESHAP addresses a wide range of toxic pollutants including dioxin and furans, mercury, the semi-volatile metals cadmium and lead, the low-volatility metals arsenic, beryllium, chromium, and antimony, particulate matter, acid gas emissions, hydrocarbons, and carbon monoxide. The NESHAP narrows the acceptable operating range of monitored parameters and requires monitoring to assure continuous compliance.

Status: Second Notice of Comment Period deadline ended July 31, 2000

Citation: LSA Notice # 00-70

The **steel pickling NESHAP** applies to facilities that are located at a major source of hazardous air pollutant (HAP) emissions and that use hydrochloric acid to "pickle" or descale and clean carbon steel. The principle HAP addressed by this NESHAP is hydrochloric acid. Pickling is a process in which acid solution is used to remove oxide scale from steel strip, rod, wire tubing and discrete shapes. There are 17 sources in Indiana that may be subject to this NESHAP. Existing sources subject to this regulation are required to comply by June 22, 2001; new or reconstructed sources will be required to comply at initial start up.

Status: First Notice of Comment Period deadline ended July 31, 2000.

Citation: LSA Notice #00-138 (APCB)

A status report of all rulemakings is available at www.state.in.us/idem/oam
Access the Indiana Register on-line at www.state.in.us/idem

Exciting Activities Planned for 2000

■ Regional participation opportunities

Several exciting activities will take place this season to promote increased education, awareness and reductions in ground-level ozone.

- **The Northwest Indiana Partners for Clean Air Program**, kicked off a free gas cap giveaway on July 31. Free gas caps will be distributed to vehicle owners at Northwest Indiana's Clean Air Car Check stations if their vehicle fails the gas cap portion of the test. Gas caps are available for most makes and models, while supplies last.

- **Indianapolis' KnoZone** program is considering many ideas this summer. Program managers are discussing partnering with local vehicle care facilities and auto parts stores. For more information, visit their web site at: www.knozone.com

- **Ft. Wayne's** grassroots ozone awareness program is excelling despite a low budget and a reliance on volunteer-based efforts. Educational

brochures are located in public libraries, gas stations and grocery stores. Ozone levels are announced on local weather broadcasts and public TV programs. More information can be found at the web site: www.fw-ac-deptofhealth.com

For more information about programs in your area, contact Amy Morris, Ozone Awareness Coordinator, IDEM, at (317) 233-6870.

Ozone cont'd from page 3

VOCs that help produce ozone. Even though you may not see anything coming from your exhaust, the emissions are there. Exhaust from gasoline powered lawn equipment and recreational equipment, like boats and jet skis, also contains harmful emissions. Limiting these activities during ozone season (May - September), especially on Ozone Action Days, helps to prevent ground-level ozone formation.

Don't We Want To Save Ozone?

Ozone exists in both the upper and the lower atmosphere. In the upper atmosphere, or stratospheric layer, ozone protects us from the damaging rays of the sun. In the lower atmosphere, or tropospheric layer, ozone is a health hazard.



How Does Ground-Level Ozone Affect Our Health?

Ozone can cause shortness of breath, coughing, wheezing, and eye and nose irritation. It can be especially harmful to older adults, children, asthmatics, and people with chronic respiratory ailments.

What Is An Ozone Action Day?

Ozone Action Days are part of a voluntary action program. Every day during the ozone season, IDEM collects air quality data from air monitoring stations throughout the state. When data from these monitors and meteorological data indicate that conditions are right for unhealthy levels of ozone, IDEM calls an Ozone Action Day. Publicizing Ozone

Action Days through IDEM's website, hot-line, the media, and local awareness groups allows citizens to make informed choices about outdoor activities on those days, and also urges them to reduce emissions. The public and members of the voluntary program are asked to take specific action to reduce their contribution to ozone formation. Not all regions of the state have voluntary ozone awareness or action programs. IDEM posts ozone information for all regions on its web page at www.state.in.us/idem/oam/smog. The Ozone Hotline, (800) 631-2871, also provides daily ozone information during ozone season.

Areas of the state that have active ozone action programs include: Indianapolis, Northwest Indiana, South Bend and Clark and Floyd counties. The Ft. Wayne/Allen County area has an active ozone awareness program. It does not declare ozone action days, but provides educational materials.

Clean Air Bulletin

is published by the Indiana Department of Environmental Management's Office of Air Management. All information included in ***Clean Air Bulletin*** is for public use. Dates, schedules, and times are subject to change without notice.

You can write to us at:

Clean Air Bulletin

P.O. Box 6015, Room N1001 - IGCN, 100 North Senate Ave., Indianapolis, IN 46206-6015

Clean Air Bulletin is also available on-line. The most current issue can be viewed at www.state.in.us/idem/cab

If you would like to be added to the mailing list, please call 1-800-451-6027 ext. 3-0426

Clean Air Bulletin

P.O. Box 6015

Room N1001 - IGCN

100 North Senate Avenue

Indianapolis, IN 46206-6015

Printed on recycled paper

NEXT TIME...

Look for these topics in the following issue:

--*NOx Rule Update*

--*Toxics Rules*

--*PM2.5 Monitoring*

--*Bi-Lingual Asbestos*

--*Lead Abatement*

Outdoors cont'd from page 6

responsible for providing a volunteer to direct the day's activities, all materials necessary to complete a project and coordinate community involvement. Each 4- to 8-member Outdoors 2000 team will provide up to six hours of physical assistance for one day depending on need. Schools and non-profit agencies interested in participating in the Outdoors 2000 program should submit an application. For more information on the Outdoors 2000 program, please visit the Project LEAP Web site at: <http://www.state.in.us/idem/leap/outdoors/> or call (800) 451-6027, press 0, and ask for extension 3-0700.

IN THIS ISSUE

Diesel Initiatives, pg. 1

From the Assistant Commissioner, pg. 2

The Great Outdoors, pg. 6

Ozone Season 2000, pg. 3

Ozone Reduction Efforts Continue, pg. 1

Project LEAP, pg. 2

Rulemaking Updates, pg. 5